UNITED STATES PATENT AND TRADEMARK OFFICE

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MILES & STOCKBRIDGE P.C.
Oracle International Corporation
1751 Pinnacle Drive
Suite 1500
Tysons Corner, VA 22102-3833

EXAMINER
MEINECKE DIAZ, SUSANNA M

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte MANOJ ABRAHAM and QUN CHEN

Appeal 2016-000287[1]
Application 12/751,509[2]
Technology Center 3600

Before HUBERT C. LORIN, NINA L. MEDLOCK, and
BRADLEY B. BAYAT, *Administrative Patent Judges*.

MEDLOCK, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's final
rejection of claims 1, 2, 5–7, 10–12, and 15–19. We have jurisdiction under
35 U.S.C. § 6(b).

We REVERSE.

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[1] Our decision references Appellants' Appeal Brief ("App. Br.," filed
May 29, 2015) and Reply Brief ("Reply Br.," filed October 2, 2015), and the
Examiner's Answer ("Ans.," mailed August 4, 2015), and Final Office
Action ("Final Act.," mailed December 3, 2014).
[2] Appellants identify Oracle International Corporation as the real party in
interest. App. Br. 3.

CLAIMED INVENTION

Appellants' claimed invention relates to "a supply chain planning system" (Spec. ¶ 1).

Claims 1, 6, and 11 are the independent claims on appeal. Claim 1, reproduced below, is illustrative of the claimed subject matter:

> 1. A non-transitory computer-readable medium having instructions stored thereon that, when executed by a processor, cause the processor to create a plan, the creating comprising:
>
> creating supply chain planning data that is stored within a database;
>
> creating a base supply chain plan stored within the database using the supply chain planning data, wherein the base supply chain plan comprises an independent supply chain plan that includes a set of supply chain planning data for the base supply chain plan, wherein the base supply chain plan comprises a first collection of one or more records in one or more tables of the database, and wherein the one or more records of the first collection are identified as belonging to the base supply chain plan;
>
> making changes to the base supply chain plan based on an alternate supply chain scenario;
>
> saving the changes to the base supply chain plan as a delta supply chain plan stored within the database, wherein the delta supply chain plan comprises a dependent supply chain plan that includes supply chain planning data associated with changes to the base supply chain plan, wherein, for other supply chain planning data of the delta supply chain plan, the delta supply chain plan refers to the supply chain planning data of the base supply chain plan, wherein the delta supply chain plan comprises a second collection of one or more records in one or more tables of the database, and wherein the one or more records of the second collection are identified as belonging to the delta supply chain plan;

tracking the changes to the base supply chain plan by creating, for each change, a change record within a user actions table stored within the database, wherein each change record is separate from the one or more records of the delta supply chain plan;

wherein each change record comprises a unique identity, a plan identity that identifies the delta supply chain plan that the change is associated with, a base plan identity that identifies the base supply chain plan that the delta supply chain plan is associated with, and the change;

loading the delta supply chain plan into an object residing in a memory;

applying a planning algorithm to the object residing in the memory that comprises the delta supply chain plan to generate a new supply chain solution;

creating a new delta supply chain plan that refers to the supply chain planning data of the base supply chain plan, wherein the new delta chain plan further comprises a third collection of one or more records in one or more tables of the database, and wherein the one or more records of the third collection are identified as belonging to the new delta supply chain plan; and

copying the supply chain planning data of the delta supply chain plan into the new delta supply chain plan.

REJECTIONS

1.   Claims 1, 2, 5–7, 10–12, and 15–19 are rejected under 35 U.S.C. § 101 as directed to non-statutory subject matter.

2.   Claims 1, 2, 5–7, 10–12, and 15–19 are rejected under 35 U.S.C. § 102(b) as anticipated by Gupta et al. (US 2006/0288046 A1, pub. Dec. 21, 2006) (hereinafter "Gupta").

ANALYSIS

Non-Statutory Subject Matter

In rejecting claims 1, 2, 5–7, 10–12, and 15–19 under 35 U.S.C.
§ 101, the Examiner finds that the claims are directed to the abstract idea of
"applying a planning algorithm to a supply chain plan to generate a new
supply chain solution (an idea of itself, organizing human activities)"
(Ans. 9) and that "the claims amount to nothing significantly more than
applying an abstract idea using a general purpose machine" (*id.* at 2).

Appellants argue, *inter alia*, that the claims are not directed to an
abstract idea because they "are directed to a specific application of a supply
chain planning system that utilizes a novel 'base-plus-delta' data model for
storing data within a data store . . ." (App. Br. 21), and that the base-plus-
delta model provides for faster copying (*id.* at 23).

The Examiner does not dispute Appellants' assertion that the
invention provides faster processing. According to the Examiner, "choosing
to store less data can yield the natural result of faster processing and less
memory usage" (Ans. 9). The Examiner, thus, concedes that the invention
provides an improvement in computational efficiency, i.e., faster processing
and less memory usage — a finding squarely at odds with the Examiner's
finding that "the current claims attempt to improve only the business concept
itself." (*id.* at 3).

The Examiner has not adequately shown that the claimed invention
does not effect an improvement in computer functionality, *cf. Enfish, LLC v.
Microsoft Corp.*, 822 F.3d 1327, 1335 (Fed. Cir. 2016) ("Software can make
non-abstract improvements to computer technology just as hardware
improvements can.") and, thus, has not adequately shown the claims are

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directed to an abstract idea. *See Enfish*. 822 F.3d at 1335 ("we find it relevant to ask whether the claims are directed to an improvement to computer functionality versus being directed to an abstract idea, even at the first step of the *Alice* analysis.").

Therefore, we do not sustain the Examiner's rejection of claims 1, 2, 5–7, 10–12, and 15–19 under 35 U.S.C. § 101.

Anticipation

Independent Claim 1 and Dependent Claims 2 and 5

In rejecting claim 1 as anticipated by Gupta, the Examiner cites paragraphs 26–29, 61, 71, 73, and 84 as disclosing the argued limitation (Final Act. 5; *see also* Ans. 4). The Examiner finds that "Gupta teaches deltas and vectors to reflect changes proposed by a delta supply chain plan" and that "[c]hild sandboxes may be analyzed in relation to a base scenario" (Ans. 8 (citing Gupta ¶¶ 26–29)).

Appellants argue, *inter alia*, that the Examiner erred in rejecting independent claim 1 under 35 U.S.C. § 102(b) because Gupta does not disclose "saving the changes to the base supply chain plan as a delta supply chain plan" and "wherein, for other supply chain planning data of the delta supply chain plan, the delta supply chain plan refers to the supply chain planning data of the base supply chain plan," as recited in claim 1 (App. Br. 11–15). According to Appellants, "[t]he child sandbox described in Gupta is not a 'delta supply chain plan' as recited in claim 1, because the child sandbox includes <u>all</u> cell values from its parent sandbox" (*id.* at 14). Appellants argue that claim 1 requires "that the delta supply chain plan does not include the supply chain planning data of the base supply chain plan" (*id.* at 15).

During examination, "claims . . . are to be given their broadest reasonable interpretation consistent with the specification, and . . . claim language should be read in light of the specification as it would be interpreted by one of ordinary skill in the art." *In re Amer. Acad. of Sci. Tech Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004) (citation omitted).

In responding to Appellants' argument, the Examiner maintains that "the claimed invention does not preclude the new delta supply chain plan from containing all of the data of the base plan" (Ans. 8). However, we agree with Appellants that the Examiner improperly interprets the claim language. A person of ordinary skill in the art would understand from the Specification that the delta supply chain plan does not include the supply chain planning data of the base supply chain plan. For example, paragraph 59 of Appellants' Specification discloses that "[a] delta plan only includes changes to a base plan" and "[f]or all other planning data, a delta plan refers to the original data in a base plan."

Gupta discloses a system for "efficiently running 'what if' scenarios with large, multi-dimensional data sets" (Gupta ¶ 3). These what-if scenarios are represented by hierarchical "sandboxes" that are made up of data blocks and change lists (*id.* Fig. 1; ¶¶ 21–29). Although each child sandbox in the hierarchy includes a change list entry (CLE) and a reference to its parent, Gupta also discloses that "[e]ach of the sandboxes has its own separate set of blocks" and "[t]hese blocks are 'snapshots,' that is copies made at a particular point in time, of the blocks in the parent sandbox with changes from the child sandbox(es) applied" (*id.* ¶ 73). As discussed above, the proper construction of "delta supply chain plan" is a plan that *only* includes changes to a base plan, and does not include copies of other (i.e.,

unchanged) planning data of the base plan. We, therefore, agree with Appellants that the child sandboxes disclosed in Gupta do not constitute "a delta supply chain plan," as called for in claim 1 (Reply Br. 9).

In view of the foregoing, we do not sustain the Examiner's rejection of claim 1 under 35 U.S.C. § 102(b). For the same reasons, we also do not sustain the Examiner's rejection of dependent claims 2 and 5.

Independent Claims 6 and 11 and Dependent Claims 7, 10, 12 and 15–19

Independent claims 6 and 11 include language substantially similar to the language of independent claim 1, and stand rejected based on the same rationale with respect to Gupta applied with respect to claim 1. Therefore, we do not sustain the rejection under 35 U.S.C. § 102(b) of independent claims 6 and 11, and claims 7, 10, 12 and 15–19, which depend therefrom, for the same reasons set forth above with respect to claim 1.

DECISION

The Examiner's rejection of claims 1, 2, 5–7, 10–12, and 15–19 under 35 U.S.C. § 101 is reversed.

The Examiner's rejection of claims 1, 2, 5–7, 10–12, and 15–19 under 35 U.S.C. § 102(b) is reversed.

REVERSED